

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims in this application:

Claim 1 (Currently Amended) An information processing apparatus, comprising:

a storage means unit for storing raw data and time axis data related to said raw data and stored in said storage ~~means~~ unit by association with said raw data;

a thumbnail icon generating means unit for generating a thumbnail icon representing said raw data read from said storage means;

a spiral period setting means unit for setting a spiral period of a virtual spiral based upon a unit of time selected from a plurality of units of time, each of said plurality being repeated in accordance with a predetermined pattern;

a spiral axis setting means unit for setting a spiral axis of said virtual spiral ~~that represents a vicissitude of said unit of time;~~ and

a thumbnail icon array displaying means unit for displaying said thumbnail icon in an array on said virtual spiral based upon said time axis data associated with said raw data represented by said thumbnail icon;

wherein said spiral axis setting unit sets a direction in XYZ space and a slope of said spiral axis.

Claim 2 (Currently Amended) The information processing

apparatus according to claim 1, said information processing apparatus further comprising:

a representative thumbnail selecting ~~means~~ unit for selecting one of a plurality of thumbnail icons displayed in said array on said virtual spiral as a representative thumbnail icon; and

a representative thumbnail icon array displaying ~~means~~ unit for displaying said representative thumbnail icon selected by said representative thumbnail selecting ~~means~~ unit in said array on said virtual spiral.

Claim 3 (Currently Amended) The information processing apparatus according to claim 1, said information processing apparatus further comprising:

a spiral layer synthesizing ~~means~~ unit for synthesizing a plurality of spiral layers each including said virtual spiral, said spiral axis, and said thumbnail icon; and

a synthesized layer displaying ~~means~~ unit for displaying a synthesized layer produced by said spiral layer synthesizing ~~means~~ unit.

Claim 4 (Currently Amended) The information processing apparatus according to claim 1, further comprising:

a thumbnail icon extracting ~~means~~ unit for extracting a specific thumbnail icon from a plurality of thumbnail icons displayed in said array based on said time axis data based upon attribute data of said raw data; and

a data outputting ~~means~~ unit for outputting said raw data

represented by said specific thumbnail icon extracted by said thumbnail icon extracting ~~means~~ unit.

Claim 5 (Currently Amended) The information processing apparatus according to claim 1, wherein said unit time corresponding to said spiral period set by said spiral period setting ~~means~~ unit is one of a month unit and a one year unit including a spring, a summer, an autumn, and a winter.

Claim 6 (Cancelled).

Claim 7 (Currently Amended) The information processing apparatus according to claim 2, wherein said representative thumbnail icon array displaying ~~means~~ unit displays said thumbnail icon as a semitransparent display.

Claim 8 (Currently Amended) The information processing apparatus according to claim 3, further comprising a visual point moving ~~means~~ unit for moving a visual point of said spiral layer displaying said virtual spiral, said spiral axis, and said thumbnail icon.

Claim 9 (Currently Amended) The information processing apparatus according to claim 8, wherein said visual point moving ~~means~~ unit automatically moves said visual point of said spiral layer along a time axis.

Claim 10-14 (Cancelled).

Claim 15 (Currently Amended) A computer graphic display program storage method comprising the steps of:

storing raw data and time axis data related to said raw data in a storage ~~means~~ unit by association with said raw data and reading said raw data;

generating a thumbnail icon representing said raw data read in said storage step;

setting a spiral period of a virtual spiral based upon a unit of time selected from a plurality of units of time, each of said plurality being repeated in accordance with a predetermined pattern;

setting a spiral axis of said virtual spiral that ~~represents a vicissitude of said unit of time~~; and

displaying said thumbnail icon in an array on said virtual spiral based upon said time axis data associated with said raw data represented by said thumbnail icon,

wherein said spiral axis setting step sets a direction in XYZ space and a slope of said spiral axis.

Claim 16 (Previously Presented) The computer graphic display program storage method according to claim 15, further comprising the steps of:

selecting a specific thumbnail icon of a plurality of thumbnail icons displayed in said array on said virtual spiral as a representative thumbnail icon; and

displaying said representative thumbnail icon selected in said representative thumbnail icon selecting step in said

array on said virtual spiral.

Claim 17 (Previously Presented) The computer graphic display program storage method according to claim 15, further comprising the steps of:

----- synthesizing a plurality of spiral layers each including said virtual spiral, said spiral axis, and said thumbnail icon; and

displaying one of said plurality of synthesized layers produced in said spiral layer synthesizing step.

Claim 18 (Previously Presented) The computer graphic display program storage method according to claim 15, further comprising the steps of:

extracting a specific thumbnail icon from a plurality of thumbnail icons displayed in said array based on said time axis data based upon attribute data of said raw data; and

outputting said raw data represented by said specific thumbnail icon selected in said thumbnail icon extracting step.

Claim 19 (Previously Presented) The computer graphic display program storage method according to claim 15, wherein said unit time corresponding to said spiral period set by said spiral period-setting step is one of a month unit and a one year unit including a spring, a summer, an autumn, and a winter.

Claim 20 (Cancelled).

Claim 21 (Previously Presented) The computer graphic display program storage method according to claim 16, wherein in said representative thumbnail icon array displaying step said representative thumbnail icon is displayed as a semitransparent display.

Claim 22 (Previously Presented) The computer graphic display program storage method according to claim 17, further comprising a step of moving a visual point of said spiral layer displaying said virtual spiral, said spiral axis, and said thumbnail icon.

Claim 23 (Previously Presented) The computer graphic display program storage method according to claim 22, wherein said visual point moving step automatically moves said visual point of said spiral layer along a time axis.

Claims 24-30 (Cancelled).